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 INT CL<sup>6</sup> **G10L 3/00 , H04B 1/38 , H04M 1/26 1/27**  
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(54) Abstract Title  
**Radio telephone with language selection for voice dialling**

(57) A mobile radio telephone has a hand set 1 with a keypad 2 and a display 3, and a vehicle mounted adapter unit 4 with a microphone 5, a loudspeaker 6 and a voice responsive dialling unit 7. A number of different languages may be selected by the user for the text on the display 3. When the user selects the text display language, a signal is sent from the hand set 1 to the voice dialling unit 7 so that the unit 7 selects a language vocabulary for use in voice dialling which is the language currently selected for the display 3. A set of vocabularies representing dialects or regional accents associated with the chosen language may also be presented by means of a menu on the display 3, so that the required dialect can also be selected.

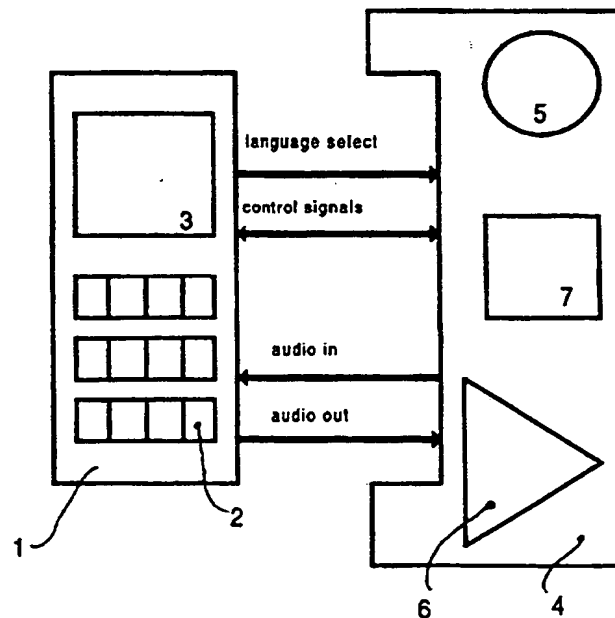


Figure 1

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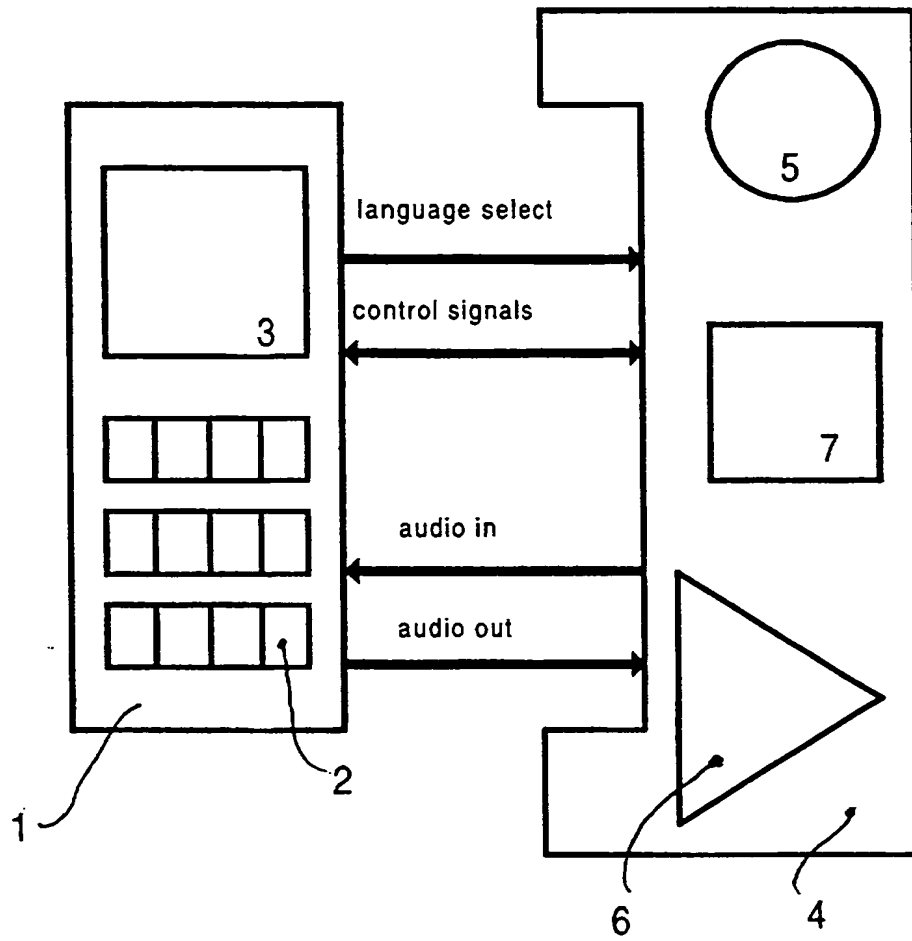


Figure 1

## Language selection for voice dialing

This invention relates to radiotelephones and in particular it relates to radiotelephones incorporating or for use with voice dialing units.

Unsafe driving of vehicles because of the use of mobile phones by the driver of a vehicle whilst driving has been a major factor in the implementation of voice dialing units for installation in vehicles. Voice dialing units recognize spoken words allowing the driver of a vehicle to enunciate a name or number before or after a verbal command such as 'dial'.

Radiotelephone hand sets may be configured by the user to display text in a number of different languages typically by means of the keypad. Hand sets and vehicle voice dialing units are sold in marketing areas which encompass many different languages and dialects. It is sometimes impracticable and always undesirable from the manufacturer's point of view, to produce different equipment standards for each language area.

If a voice dialing kit is required to recognize verbal commands and digits in many languages, however, its recognition accuracy is decreased and ambiguities may arise. Therefore a convenient means of restricting the vocabulary of voice dialing units to the commands to be identified is desirable.

According to the invention there is provided a radiotelephone with a connection to a voice dialing unit, the radiotelephone having a text display and means for selecting the language of the text display and control means operable via the connection to select automatically from the vocabularies of the voice dialing unit the vocabulary for the language selected for the display on the radiotelephone.

An examples of the invention will now be described with reference to the sole figure 1 in which a mobile telephone hand set 1 has a keypad 2 and a visual display 3. A number of different languages (e.g. 17 languages on the NEC DB2000 radiotelephone) may be selected by the user for the text to be displayed on the visual display 3. The mobile telephone 1 is connected via a standard plug and socket connection (not shown) to the vehicle mounted adapter unit. The vehicle mounted adapter unit 4 includes a microphone 5 and a loudspeaker 6.

A voice dialing unit 7 is contained within the vehicle mounted adapter unit 4. Within the voice dialing unit 7, or associated with it, language vocabularies are stored. These language vocabularies are optimized correctly to translate the voice commands given in a particular language.

In the prior art it is necessary to select one of these different language vocabularies by manually configuring the voice dialing unit, for example using a user interface means provided by the unit (for example a keyboard and visual display located on the unit).

In order to make use of the 'hands free' voice dialing unit, the user connects radiotelephone hand set 1 to the vehicle mounted adapter unit 4. In addition to the usual control signals to and from hand set 1 and vehicle mounted adapter unit 4, a control signal from the hand set 1 to the voice dialing unit 7 selects a language vocabulary for use by the voice dialing unit 7. The language vocabulary selected for use in the voice dialing unit is the vocabulary for the language currently selected for display on visual display 3 in radiotelephone hand set 1.

For most, if not all languages the pronunciation of words and phrases will vary a great deal according to the dialect or regional accent of the speaker. A language vocabulary based exclusively on the written word is unlikely therefore to accommodate dialects and regional accents sufficiently well to avoid completely ambiguities and loss of recognition accuracy for verbal commands.

This variation in pronunciation is sometimes overcome by means of a learning process whereby the user repeats various commands from which a vocabulary specific to the user is synthesized. The present invention has the effect of reducing the likelihood of ambiguity without resort to a learning process.

To cope with this problem of dialect, on selection by the user of a 'text' language for visual display 3, a set of vocabularies representing dialects associated with the display language may also be selected from the radiotelephone. Selection of the dialect may be made, conveniently by means of a menu appearing on the display.

The accuracy and precision of recognition for the voice commands are improved considerably by providing a vocabulary which has been optimized for the language and dialect of the commands.

## Claims

1. A radiotelephone with a connection to a voice dialing unit, the radiotelephone having a text display and means for selecting the language of the text display and control means operable via the connection to select automatically from the vocabularies of the voice dialing unit the vocabulary for the language selected for the display on the radiotelephone.
2. A radiotelephone as in claim 1 where the vocabulary for the language selected for the display on the radiotelephone includes vocabularies representing dialects associated with the display language .
3. A radiotelephone as in claim 2 where the vocabularies representing dialects associated with the display language are selectable from the radiotelephone.
4. A radiotelephone as in claim 3 where selection of the dialects associated with the display language is by means of a menu appearing on the display.



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**Patents Act 1977**  
**Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.P): H4L LECX; H4K KFH, KF42.

Int CI (Ed.6): G10L 3/00; H04B 1/38; H04M 1/26, 1/27, 1/274, 3/42; H04Q 7/32.

Other: ONLINE - EDOC, JAPIO, WPI.

**Documents considered to be relevant:**

| Category | Identity of document and relevant passage | Relevant to claims |
|----------|---|--------------------|
| A        | EP0611135A1 (INTERVOICE) - Abstract       | 1                  |
| A        | US5335261 (SONY) - Abstract               | 1                  |
| A        | US5305374 (SNYDER) - Abstract             | 1                  |

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